

WATER INTEGRATION PLANNING FOR COASTAL NEW HAMPSHIRE TOWNS

STAY IN TOUCH

The National Estuarine Research Reserve System (NERRS) Science Collaborative is committed to sharing information about the projects we fund in the most effective way we can. For information about this project, contact Robert Roseen, Geosyntec Consultants, 603-686-2488 or, rroseen@geosyntec.com. We will also communicate about this project's progress through nerrs.noaa.gov, webinars, conferences, and meetings.

REQUEST FOR IDEAS

Work in the NERRS and want to learn more about this project? Consider submitting a proposal to one of our Transfer Request for Ideas (TRFI). These scaled funding opportunities encourage NERRS managers and staff to work with research teams to develop ideas to share information generated by Science Collaborative funded research within the NERR System. Ideas could include, but are not limited to, face-to-face trainings, webinars, workshops and conferences, social media-based communities, web sites, guides, or case studies. For more information contact Cindy Tufts, 603-862-3676 or, cindy.tufts@unh.edu.

What's happening?

An interdisciplinary team from Geosyntec Consultants, the University of New Hampshire, and the Great Bay National Estuarine Research Reserve (NERR) has received \$438,227 to coordinate wastewater and stormwater management, improve water quality in the Squamscott River and Great Bay, and support the area's economic viability. To reach this goal, the team will work with municipal leaders in three communities to develop an integrated plan for stormwater and wastewater management—one that takes into account green and gray infrastructure, climate change impacts, and community concerns over the social, economic, and environmental benefits of inter-municipal collaboration.

Why this project?

Population growth in New Hampshire's coastal communities is straining existing municipal infrastructure and placing water quality and public health at risk. The spread of impervious surfaces like roads and parking lots can increase the volume of polluted stormwater runoff beyond the capacity that stormwater management structures and policies can handle, while increases of wastewater effluent can overwhelm treatment plants.

At the same time, communities are being called on to respond to new, more stringent permit requirements for discharging stormwater and wastewater. Meeting these regulations will require innovative, affordable approaches to



The Squamscott River, Exeter, New Hampshire. Exeter is one of 3 communities that will develop an integrated watershed plan to help target scarce financial resources for maximum benefit to public and environmental health.

managing stormwater and wastewater, and the public will to implement them.

The New Hampshire towns of Exeter, Stratham, and Newfields share a history of collaboration through their regional school district, management of hazardous waste, and recreation programs. This project will use the towns' precedent of municipal collaboration to help them address their water quality needs through integrated planning—a new concept that combines traditional infrastructure with sustainable, pollution reducing infrastructure for stormwater management.

Integrated planning allows towns to significantly improve how to respond to the Clean Water Act by helping them to target scarce financial resources where they will have the most public health and greatest environmental benefit. As a result of this project the towns will have an integrated plan to evaluate and manage water quality and climate impacts within and across their municipal boundaries, and will be able to quantify the economic and performance advantages of municipal collaboration and integration of water resource planning.

[Learn more on back page...](#)

About the funder

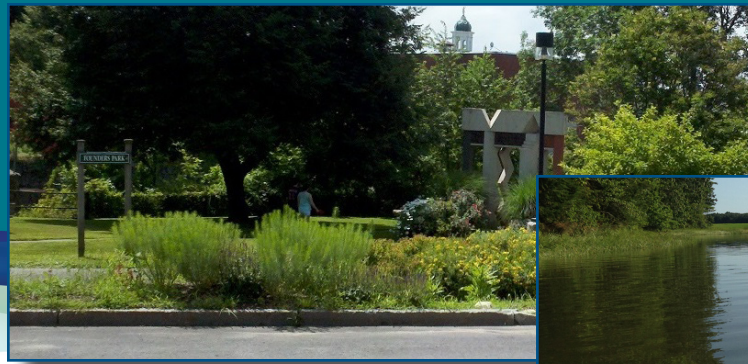
The NERRS Science Collaborative puts Reserve-based science to work for coastal communities coping with the impacts of land use change, stormwater, non-point source pollution, and habitat degradation all in the context of a changing climate. We have a threefold approach to connecting science to decision making:

- **Funding:** Using a competitive RFP, we fund projects that incorporate collaboration and applied science to address coastal management problems identified as priorities for Reserves and their communities.
- **Transfer of knowledge:** Through our transfer program, the science we fund is shared throughout the NERRS and the communities they serve.
- **Graduate education:** Through TIDES (Training for the Integration of Decision Making and Ecosystem Science), a non-thesis Master's degree program hosted by the University of New Hampshire, we train the next generation of professionals to link science to coastal decision making.

The program operates by a cooperative agreement between the University of New Hampshire (UNH) and the National Oceanic and Atmospheric Administration.

Learn more at....

[nerrs.noaa.gov/
ScienceCollaborative.aspx](http://nerrs.noaa.gov/ScienceCollaborative.aspx)



A bioretention system in Exeter, New Hampshire (left), and kayaking on the Squamscott River.



How will this project work?

In New Hampshire, most water management decisions are made at the town level, while watersheds typically cross municipal boundaries. This makes collaboration essential to ensuring safe water with the least financial burden on communities. As a result, this project team will use the principles of participatory process to convene stakeholders who will work together to identify best management approaches to stormwater and wastewater needs. This project will be managed through the interaction of four groups:

- Coordinating Team manages the project's technical components, sets Project Team agendas, and steers discussions to workable outcomes.
- Project Team combines the Coordinating Team with intended users from the communities, the US Environmental Protection Agency, and the NH Department of Environmental Services. They review the research scope, determine management approaches, and identify opportunities to move forward.
- Advisory Committee is comprised of local interest groups and will provide input at key project points.
- National Stakeholders are located throughout the country and have an interest in replicating the project's findings. The Project Team will share materials with them and present results through webinars and in person.

The Coordinating Team will work the other groups to guide this effort through the following objectives:

- Collect data to develop the Integrated Plan for stormwater and wastewater in the Squamscott-Exeter watershed, including information to support a multiple benefits analyses of community concerns about social, economic, and environmental benefits of integrated water resources planning and the usage of Green Infrastructure.
- Develop and collect input on land-use and pollutant load modeling, interpretations of results, scenarios for green and gray Infrastructure, and a draft watershed monitoring framework.
- Develop and collect input on the draft Integrated Plan and provide guidance on how to use the associated implementation tracking and planning tools.
- Present an executive summary of the Integrated Plan to town partners; this overview will be designed to be accessible to a range of stakeholders in the Great Bay watershed and in the larger water resource community. Ultimately, the plan will provide communities with the information necessary to make long-term financial commitments and planning decisions.

More information about this project is available at www.WISENH.net.